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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/595,081	02/01/2006	Tomohisa Tenra	MAT-8798US	2252
52473	7590	01/17/2008	EXAMINER	
RATNERPRESTIA			THOMAS, ALEXANDER S	
P.O. BOX 980			ART UNIT	PAPER NUMBER
VALLEY FORGE, PA 19482			1794	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/595,081	TENRA, TOMOHISA
	Examiner Alexander Thomas	Art Unit 1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 12 December 2007.
- 2a) This action is **FINAL**.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-12 is/are pending in the application.
  - 4a) Of the above claim(s) 11 and 12 is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-10 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.
 

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 2/1/06, 3/9/07, 12/12/07.
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application
- 6) Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Claims 11 and 12 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 12/12/07.

### ***Drawings***

2. Figure 7 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 112***

3. Claim 4 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a core without binder, does not reasonably provide enablement for core with binder that is kept together by entanglement of the parts of the glass fibers and not by the binder. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. The entire specification is directed to a binderless core; see for example the Abstract, [0034] and [0037]. There

is no disclosure of how one can use a binder in the core and not have it bind some of the fibers together as set forth in claim 1.

4. Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. This claim describes the fibers of the core as being bonded together with binding material which is in direct contradiction to Claim 1 upon which it depends. Therefore an ambiguity exists rendering the meaning and scope of the claim unclear.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-3, 5-7 and 10 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Jung et al 2002/0167105. The reference discloses a vacuum heat insulator comprising a core of glass wool that contains no binder and is encased in an envelope; see [0010]. The core is pressurized

at a temperature higher than the strain temperature of the glass [0020] and may have a final density within the claimed range [0009]. This disclosure is considered to meet the instantly claimed temperature requirements since the temperature in the reference is high enough to allow some deformation of the fibers [0015] but not high enough to excessively break the fibers [0020]. Furthermore, the temperature is a process limitation and it is the final products that must be compared. The final product in the reference meets the instant claims since it is comprised of a core of glass wool that was pressurized at a high temperature. Regarding the entanglement of the fibers, there will inherently be some entanglement of the fibers in view of the pressure applied during forming of the core. In any event, it would have been obvious to one of ordinary skill in the art to adjust the temperature in forming the core in the reference to any specific amount in order to achieve optimum structure properties for a particular end use.

Concerning claims 5 and 6, the reference's core is considered to inherently possess these properties in view of its disclosed density, lack of binder, being made from the same material, and the similar pressure used to form the core. In any event, it would have been obvious to one of ordinary skill in the art to adjust pressure, temperature, etc. in the process of the reference to provide optimum physical properties in a product for a particular end use.

8. Claims 1, 2, 4, 5, 9 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Rusek. The reference discloses a vacuum heat insulator comprising a core of glass wool that contains binder and is encased in an envelope; see column 4, lines 48-57, column 5, lines 28-40 and column 6, lines 13-17. There will inherently be

some entanglement of the glass fibers in the core, particularly in view of the structure shown in the Figures, and the fact that the core is heated and pressed.

9. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jung et al 2002/0167105. The reference discloses a vacuum heat insulator comprising a core of glass wool that contains no binder and is encased in an envelope; see [0010]. The core is pressurized at a temperature higher than the strain temperature of the glass [0020] and may have a final density within the claimed range [0009]. This disclosure is considered to meet the instantly claimed temperature requirements since the temperature in the reference is high enough to allow some deformation of the fibers [0015] but not high enough to excessively break the fibers [0020]. Furthermore, the temperature is a process limitation and it is the final products that must be compared. The final product in the reference meets the instant claims since it is comprised of a core of glass wool that was pressurized at a high temperature. Regarding the entanglement of the fibers, there will inherently be some entanglement of the fibers in view of the pressure applied during forming of the core. In any event, it would have been obvious to one of ordinary skill in the art to adjust the temperature in forming the core in the reference to any specific amount in order to achieve optimum structure properties for a particular end use. The examiner takes official notice of the fact that sodium, an alkali metal, is a common ingredient of glass added to improve processing. It would have been obvious to one of ordinary skill in the art to use a glass formulation including an alkali metal to form the glass fibers in the product of the reference. It would also have been obvious to one of ordinary skill in the art to adjust the amount of alkali

through routine experimentation to provide optimum physical properties for a particular end use.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander Thomas whose telephone number is 571-272-1502. The examiner can normally be reached on 6:30-4:00 M-THUR.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Alexander Thomas/  
Primary Examiner  
Art Unit 1794